

REMARKS

In the office action dated January 29, 2009, the examiner rejected claims 1-11 under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement; claims 1-11 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement; claims 1-11 under 35 U.S.C. 112, second paragraph, as being indefinite; and the disclosure was objected to under 37 C.F.R. 1.71 as being “incomprehensible.”

Prior to the present amendment, claims 1-11 were pending. Applicants have cancelled claims 1-11 and added new claims 12-24. Accordingly, claims 12-24 are presently pending.

Support for new claims 12-24 can be found in the specification on page 3, lines 7-25; page 4, lines 14-27; page 5, line 1 to page 9, line 6; and in claims 1-11 as originally filed. Accordingly, no new matter has been added by the amendments to the claims.

THE INVENTION

A method for extracting fermentation hydrocarbon-containing product from a fermentation liquid by (i) conducting a fermentation using a biocatalyst to form a hydrocarbon-containing product in a fermentation liquid; (ii) contacting the fermentation liquid with a solvent-impregnated porous carrier, wherein the solvent-impregnated carrier has a density different from the fermentation liquid and the hydrocarbon-containing product is sorbed by the solvent-impregnated carrier; and (iii) separating the hydrocarbon-containing product from the solvent-impregnated porous carrier is claimed.

35 U.S.C. 112, FIRST PARAGRAPH, REJECTIONS

Claims 1-11 were rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement and the written description requirement. According to the examiner, the “claim(s) contains subject matter which was not described in the specification in such a way

as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention in view of the preamble which is drawn to the ‘production of hydrocarbon’, however the specification fails to teach the production of a ‘hydrocarbon’ by the claimed process.”

As discussed above, applicants have cancelled claims 1-11 and created new claims 12-24. The preamble of the new claims is directed to “A method for extracting fermentation hydrocarbon-containing product from a fermentation liquid....” Applicants discuss the meaning of the term “hydrocarbon” below.

Regarding the written description requirement, the examiner states “[t]he claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention for the election of species ‘para hydroxystyrene.’”

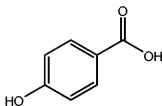
Applicants discuss the term “hydrocarbon” below. Applicants further maintain that para hydroxystyrene falls within the definition of hydrocarbon as described in the claims.

35 U.S.C. 112, SECOND PARAGRAPH, REJECTIONS

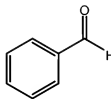
Claims 1-11 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. The examiner points out that the examples of hydrocarbons in the specification include 4-hydroxybenzoic acid, benzaldehyde, catechols (e.g. 3-methylcatechol), benzylalcohol, cinnamic acid, etc. The examiner cites Hackh’s Chemical Dictionary as well as Wikipedia for a hydrocarbon being a compound containing only carbon and hydrogen atoms. The examiner contends that “[a]pplicant is required to be within the scope of the known meaning and standard for the term ‘hydrocarbon’ which this specification clearly lacks.”

However, applicants disagree. According to MPEP § 2111.01, “An applicant is entitled to be his or her own lexicographer and may rebut the presumption that claim terms are to be given their ordinary and customary meaning by clearly setting forth a definition of the term that is different from its ordinary and customary meaning(s).”

The specification as filed on page 2, line 25 to page 3, line 2 provides examples of the hydrocarbons produced by the present invention. The list includes 4-hydroxybenzoic acid, benzaldehyde, catechols (*e.g.* 3-methylcatechol), benzylalcohol, and cinnamic acid. Furthermore, the example on page 10 lists fenol, *i.e.*, phenol, as the hydrocarbon. Please see the structures drawn-out below for the hydrocarbons mentioned in the specification.



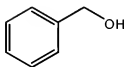
4-hydroxybenzoic acid



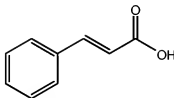
benzaldehyde



catechol



benzylalcohol



cinnamic acid



phenol

A person having ordinary skill in the art upon reading the specification would understand that the definition of hydrocarbon, according to the specification, is a compound containing

carbon and hydrogen and one or more oxygen atoms. As discussed above, an application is allowed to be his or her own lexicographer.

Accordingly, applicants respectfully request that the examiner reconsider the claims in view of the definition provided in the specification for hydrocarbon and withdraw the 35 U.S.C. 112, second paragraph, rejections.

The examiner also rejected claim 4, line 2 as being “vague and indefinite” for containing the word “preferably.” In the present amendment, applicants have cancelled claim 4. Therefore, the rejection of claim 4 has been rendered moot.

OBJECTIONS UNDER 37 C.F.R. 1.71

The examiner has also objected to the disclosure under 37 C.F.R. 1.71 as being “so incomprehensible as to preclude a reasonable search of the prior art by the examiner.” The examiner cites the term “hydrocarbon” as being not within the scope of the term “hydrocarbon” as known in the art.

As discussed above, applicant is able to be his or her own lexicographer. From the examples of “hydrocarbon” contained in the specification, a person having ordinary skill in the art would understand that the definition of hydrocarbon, according to the specification, is a compound containing carbon and hydrogen and one or more oxygen atoms.

Accordingly, applicants maintain that the rejection of the disclosure under 37 C.F.R. 1.71 should be withdrawn because given the understanding of “hydrocarbon” that a person having ordinary skill in the art would have upon reading the specification, the examiner should be able to conduct a reasonable search of the prior art. Applicants have also provided new claims that clarify the claimed invention and should assist the examiner in his search.

Applicants respectfully submit that the application is now in proper form for allowance, which action is earnestly solicited. If resolution of any remaining issue is required prior to allowance of the application, it is respectfully requested that the examiner contact applicants' attorney at the telephone number provided below.

Respectfully submitted,

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